3. Low air temperatures in central Europe from February to April.

4. Little ice off Newfoundland in spring.

5. Heavy ice off Iceland in spring.

6. Bad wheat and rye harvests in western Europe and northern Germany.

B. 1. Strong Atlantic circulation (August–February).

2. High water temperatures on the European coast (November–April).

3. High air temperatures in central Europe from February to April.

4. Heavy ice off Newfoundland in spring.

5. Little ice off Iceland in spring.

6. Good wheat and rye harvests in western Europe and northern Germany.

The wind observations made during the Antarctic expedition of the *Gauss* show that the station was on the poleward side of the barometric depression which surrounds the Antarctic ice. There were few winds from the western quadrant, and an increase of pressure to the south, with an anticyclone in that direction, must be assumed. The station was, on the whole, nearer the circumpolar low-pressure ring than the anticyclone. Cyclonic weather was more common than anticyclonic. Low temperatures prevailed with westerly winds and during calms. Easterly winds brought a rise of temperature.

Meteorological observations during the solar eclipse of August 30, last, made at Bernau, in southern Germany, showed that the temperature fell from 65.8° to 59.7° in ten minutes, and then rose again. The wind fell from a moderate velocity to a calm during the eclipse, and then increased again.

R. DeC. Ward.

NOTES ON THE HISTORY OF NATURAL SCIENCE.

HIPPOCRATEAN FISHES.

Included in the *Corpus hippocraticum* is, next after Herodotus, one of the oldest of Greek prose writings, a work 'On Regimen,' in four books, by an unknown author, yet regarded by Galen as not unworthy of the 'father of medicine' himself. Throughout all antiquity, this work, especially the second book, was held in high esteem; nor can its interest be said to have vanished at the present day, whether regarded from a historical, literary or purely scientific standpoint. In that part of the second book which treats of the dietetic value of various plants and animals, as many as fifty-two species of the latter are enumerated, seventeen of which are fishes; and their order of arrangement is such as to have suggested to Burckardt[1] the idea of a definite system, called by him the 'Coan scheme of classification.'

Notwithstanding the large number of fishes mentioned in this work, some of the names occurring here for the first time, I have been unable to find any reference to it in ichthyological literature. Both Littré and Fuchs, in their translation of the text—there is no English version—attempt a precise identification of species, but judged by the standard set by Hoffman and Jordan in their 'Catalogue of Greek Fishes,' it can not be said that these classicists have been uniformly successful. A comparison with the catalogue referred to shows that at least ten of the Hippocratean species can be recognized with certainty, five are doubtful, and the remaining two may be despaired of as hopeless. One of these, ἐλεφιτίς, also written ἐλεφητίς, seems to be peculiar to the work in question, and no one has ventured a conjecture as to its meaning.

Of great importance for the early history of ichthyology are the abundant notices contained in Athenæus, 90 species of fishes being enumerated by him in alphabetical order. The extent to which this author drew upon Dorion's compendium, and the sources from which this in turn was derived, have been set forth in an extremely interesting essay by Wellmann.[2] From this we take the following estimate of Dorion's treatise, citations from the latter occurring in thirty-four passages of Athenæus:

Die erhaltenen Fragmente zeigen, dass das Werk in ziemlich umfassender Weise die Fischwelt be-

[1] 'Das koische Tiersystem,' *Verh. Naturf. Ges. Basel,* XV., pp. 377–414, 1904.

[2] *Hermes,* Vol. XXIII., pp. 179–193 (1888). Other valuable references to the early literature are given in the chapter contributed by Eugene Oder ('Ueber Fische und Fischfang') to Susemihl's 'History of Alexandrian Literature,' Vol. I., 1891.

handelte und nicht blos über die verschiedenen Namen eines und desselben Fisches und deren Schreibung, über die verschiedenen Arten, deren Unterschiede und Aufenthaltsorte Aufschlüsse gab, sondern auch auf Vorschriften über Kochen und Braten derselben einging.

THE REAL UNICORN.

IN his review of Dr. Murray's recent work on museums, Mr. F. A. Bather[1] observes that the author refrains from any attempt to decide what the unicorn really was, notwithstanding that numerous endeavors have been made to identify fabulous creatures with modern quadrupeds. It would have been very agreeable had Mr. Bather chosen himself to enlighten us on this matter; since he does not, the following note is suggested.

What appears to have been the origin of the 'real unicorn,' that is to say, of the creature made known to the western world under that name by Ctesias, has been set forth in several interesting essays by German writers, amongst whom it will be sufficient to mention Schräder, Lüders, Lauchert and Goldstaub, the two last-named concerning themselves especially with the history of the 'Physiologus.'[2] Excellent reason is shown by these authors for freeing Ctesias of the charge of deliberate invention; he is believed to have recorded things pretty nearly as he saw them; no attempt is evident on his part to impose upon the credulity of others; although proved to be mistaken in some particulars, it is possible for us to discover the reason, the unicorn furnishing a case in point.

One can readily see that the description of the 'Monoceros' which we owe to Ctesias does not repose upon living specimens, any more than does that given by Herodotus of the Phœnix; what the former actually saw, and correctly depicts, are animal reliefs graven upon the walls of the Persian court at Persepolis, the like of which exist to this day. Among these representations the figure of the unicorn is several times repeated, being, in fact, conventionalized profiles of an Asiatic ruminant new to the Greeks, with the two horns appearing in side-view as one. Excellent copies of these figures are to be found in standard works on ancient Persian and Assyrian art.

The post-classical history of the unicorn, together with the whole menagerie of folklore, has been a favorite study of French writers, the important works of Berger de Xivrey,[3] le P. Cahier, Hippeau and others leaving little further to be desired in their line. In particular these authors have traced the extent to which popular natural history traditions became modified, early in the Christian era, through the influence of moral and religious interpretations. Thereafter, the stream of popular ideas relating to animals divides into two parallel branches, which remain for many centuries distinct: the one manifesting itself in the numerous versions of the Bestiary, the other in that purely fabulous natural history which gained wide circulation under the title of 'Wonders of India,' and whose source appears to have been a forgery of a letter from Alexander to Aristotle concerning the Indian conquest. Despite its unauthenticity, a prototype of the fraudulent document in question would seem to have been current as early as the Alexandrian period.

C. R. EASTMAN.

[1] *Museumskunde*, Vol. I. (1905), p. 170.

[2] Lauchert, F., 'Geschichte des Physiologus' (Strasburg, 1889). Goldstaub, M., 'Der Physiologus und seine Weiterbildung.' *Philol.*, Supplement, Bd. VIII. (1901), pp. 337–404.

[3] Traditions Tératologiques (Paris, 1836).

ROBERT BOWNE WARDER.

ROBERT BOWNE WARDER died at his home in Washington, July 23, 1905, after an illness extending over nearly a year.

Professor Warder was born in Cincinnati, O., March 28, 1848, and spent his early life in his country home at 'Aston,' North Bend, O. His character was formed under the influence of the Society of Friends, and this faith remained the dominant feature of his life. From childhood he showed the effect of his parents' training and example, in a broad and catholic view of the ethics of life, and in a love of truth and scientific investigation. This devotion to truth was an especial characteristic and governed his life and actions throughout.